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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,507	08/13/2001	Marcos Guilherme Schwarz	33942R002	5685

7590 01/07/2004  
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EXAMINER

NGUYEN, DANNY

ART UNIT PAPER NUMBER

2836

DATE MAILED: 01/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/831,507	SCHWARZ ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Danny Nguyen	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on 29 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,7,10,13 and 16 is/are rejected.
- 7) ☒ Claim(s) 2,3,5,6,8,9,11,12,14,15,17 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1, 4, and 7 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1, 4, 10, 13 are rejected under 35 U.S.C. 102(a) as being anticipated by Ohsaka et al. (USPN 6,205,010). Ohsaka et al. disclose a system (figures 1-3) for an electric motor (such as motor 20 shown in fig. 1 and 31) and its control circuit (1142). The control circuit comprises a set of switches (100). The system comprises a control central (e.g. controller 200) connected to the control circuit (1142), the control central (200) being capable of measuring an electric conduction time ( $t_0$  shown in fig. 23) of each switch channel (110 shown in fig. 1) and measuring a time passed between the beginning of the conduction of one of the switches and a occurrence of a surge current (between  $t_0$  to  $t_{60}$ ), the surge being measured by means of surge detector (130) which compares the values of a current that flowing through the control circuit to predetermined current value. The controller (200) making comparison between the times, and being determined whether the surge current results from a short circuit.

### ***Claim Rejections - 35 USC § 103***

Art Unit: 2836

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jonokuchi (USPN 6060859) in view of Ohsaka et al. Jonokuchi discloses an motor (17 fig. 1) having phases (17u, 17v, 17w) comprises a set of switches (3-8) being controlled by the control circuit (28) to modulate a voltage that is applied to the phases to control speed of motor, wherein the control of the switches is carried out by a control central (26) connected to the control circuit (e.g. see col. 5, lines 19-33), the surge being a value of a current that flows through the phases higher than a predetermined current value (e.g. see col. 7, lines 13-25). Jonokuchi discloses the control central (26), but the control circuit (26) of Jonokuchi does not measure a conduction time and a time passed between the beginning of the conduction of the switches and a occurrence of a surge current and compares as claimed. Ohsaka et al disclose a control circuit (200) measures a conduction time ( $t_0$ ) of the switch (110) and a time passed between the beginning of the conduction and an occurrence of a surge current ( $t_{60}$  shown in fig. 23) and compares them to determine whether the surge current results from a short circuit. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the control circuit of Jonokuchi to incorporate the control circuit which measures and compares a conduction time of the switches and a time passed between the beginning of the conduction and an occurrence of a surge current

Art Unit: 2836

of Ohsaka et al in order to prevent the switches against the rush current (see col. 1, lines 5-13).

***Allowable Subject Matter***

4. Claims 2, 3, 5, 6, 8, 9, 11, 12, 14, 15, 17, 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claims 2, 5, 8, 11, 14, 17 recite that a system for protecting an electric motor comprises the controller further indicates a condition of short-circuit of the one of the switches when time passed between the beginning of the conduction of the switch and an occurrence of a surge current ( $T_d$ ) is shorter than the conduction time multiplied by a factor ( $K$ ) which ranges from 0 to 1, and indicates a condition of surge current when ( $T_d$ ) is longer than ( $T_c$ ) multiplied by the factor ( $K$ ).

The references of record do not teach or suggest the aforementioned limitation, nor would it be obvious to modify those references to include such limitation.

***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Danny Nguyen whose telephone number is (703)-305-5988. The examiner can normally be reached on Mon to Fri 8:00 AM to 4:30 PM.

Art Unit: 2836

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (703)-308-3119. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-872-9318 for regular communications and (703)-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0956.

DN

DN

December 23, 2003

*Stephen W. Jackson*  
12-23-03

STEPHEN W. JACKSON  
PRIMARY EXAMINER